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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/052,032	01/16/2002	Donald H. Lucast	56435US002	1581
32692	7590	10/13/2004	EXAMINER	
3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427			YAO, SAMCHUAN CUA	
			ART UNIT	PAPER NUMBER
			1733	

DATE MAILED: 10/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/052,032

Applicant(s)

LUCAST ET AL.

Examiner

Sam Chuan C. Yao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) 16-24, 26, 34-43, 45-49 and 51 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15, 25, 27-33, 44 and 50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-15,25,27-33,44 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Admitted Prior Art (APA; US 2003/0175503 A1) in view of Delgado et al (US 5,908,693) and Perrault et al (US 6,039,940).

With respect to claims 1 and 6-8, the APA discloses a (meth)acrylate pressure sensitive adhesive (PSA), the adhesive is inherently tacky, thus a tackifying resin is not needed. Accordingly, "[w]hen these (meth)acrylate monomers are polymerized, the homopolymers have a glass transition temperature ( $T_g$ ) of less than about 25°C." (numbered paragraph 0004).

The APA does not teach incorporating "at least one copolymerized monoethylenically unsaturated reinforcing monomer, wherein the reinforcing monomer, when homopolymerized, has a  $T_g$  of at least about 25°C." to a meth(acrylate) PSA. However, it would have been obvious in the art to incorporate a naturally anti-microbial polymerized acrylated quaternary ammonium monomer (i.e. a covalently bonded quaternary ammonium functionality) taught by Perrault et al into a meth(acrylate) PSA disclosed by the APA (as noted above), because: a) the APA discloses providing an anti-microbial activity to pressure sensitive adhesive articles by depositing an anti-

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microbial agent into an adhesive surface of a wound dressing (numbered paragraphs 0001-0002); b) it is old in the art to form a wound dressing comprising an acrylate-based pressure sensitive adhesive of a type similar to a meth(acrylate) PSA disclosed by the APA, wherein an anti-microbial quaternary ammonium halide type agent is incorporated into a PSA as exemplified in the teachings of Delgado et al (col. 3 line 66 to col. 4 line 51; col. 8 line 30-64); and, c) Perrault et al teaches an intrinsically anti-microbial hydrogel wound dressing, the hydrogel is a polymerized acrylated quaternary ammonium monomer, accordingly the hydrogel is *"non-irritating to the wound, absorb wound exudates, ... enhance the sterile environment around the wound."*, and the *"absorbency of the hydrogel means that, when applied as a wound dressing, fewer dressing changes are necessary, the wound heals faster and a moist healing environment is maintained."* (abstract; col. 1 lines 8-13; col. 3 line 20 to col. 4 line 47; col. 6 line 23 to col. 7 line 40). It directly follows that, since a polymerized acrylated quaternary ammonium monomer (formula I; col. 3 line 40 to col. 4 line 33) taught by Perrault et al is indistinguishable from a reinforcing monomer disclosed in Applicant's specification (formula II; numbered paragraphs 0045-0048); the quaternary ammonium monomer taught by Perrault must have recited characteristics of a reinforcing monomer in recited claim 1. Moreover, since a modified PSA of the APA is indistinguishable from a recited PSA composition in claim 1, then it is also reasonably expected that, the recited properties in claims 6-10 to naturally flow from the modified adhesive of the APA.

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With respect to claims 2-5, see column 5 lines 1-43 of the Delgado et al patent.

Note: it is conventional in the art to incorporate a non-reactive poly(alkylene oxide) polymer to a meth(acryate) type PSA composition.

With respect to claims 11-14, see numbered paragraph 0003 of a disclosure of the APA. It is now well settled that *"It is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the same very same purpose ..."*. (MPEP 2144.06).

With respect to claim 25, the additional limitation in this claim reads on zero weight percent of copolymerized acidic monomer. Therefore, this claim would have been obvious in the art for the same reason as claim 1.

With respect to claims 27-33, 44 and 50, see numbered paragraph 0002 of the APA. The modified PSA of the APA is expected to be capable of adhering a wet skin, since the modified PSA is indistinguishable from the recited PSA of the present invention.

### ***Response to Arguments***

3. Applicant's arguments filed on 09-16-04 have been fully considered but they are not persuasive.

On page 13 last full paragraph, Counsel requested for Examiner to clarify which in Applicant's disclosure is taken to be an Admitted Prior Art (APA). Counsel's attention is directed to a background of Applicant's invention in the specification (numbered paragraphs 0002-0005 in a PG publication US 2003/0175503 A1. As noted above, in

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the background of Applicant's invention, Applicant discloses a (meth)acrylate pressure sensitive adhesive (PSA), the adhesive is inherently tacky, thus a tackifying resin is not needed. Accordingly, *"[w]hen these (meth)acrylate monomers are polymerized, the homopolymers have a glass transition temperature ( $T_g$ ) of less than about 25°C. This low  $T_g$  is a necessary property in (meth)acrylate materials that exhibit tack at room temperature."* (numbered paragraph 0004).

As for Counsel's argument on page 14 2<sup>nd</sup> full paragraph, Examiner agrees with Counsel that, the quaternary ammonium compounds (i.e. anti-microbial agent) taught by Delgado et al are not polymerized. It is also true that, Delgado teaches using a transfer agent to permit *"the antimicrobial agent to migrate from the interior of the adhesive layer to the exposed surface where it can contact and control pathogens before they are introduced into the wound"* (quotation in original). However, Examiner strongly disagrees with Counsel's assertion that *"there is no teaching or suggestion that an antimicrobial agent can be incorporated into a pressure sensitive adhesive polymer and maintain the effectiveness of the antimicrobial and the pressure sensitive adhesive."*

Counsel's attention is directed to column 8 lines 31-42 of the Delgado et al patent, where it clearly states *"[a]n antimicrobial system may optionally be incorporated into the pressure-sensitive adhesive for purposes of reducing the likelihood that infectious microbes will be introduced through the wound covered by the wound dressing."*

(emphasis added). Moreover, in numbered paragraph 0003 in a background of Applicant's invention, it states *"[a]pproaches in the art to providing pressure sensitive articles with antimicrobial activity include depositing an antimicrobially effective layer of*

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*a silver salt on the adhesive surface ... or incorporating an antimicrobial agent [without a transfer agent]... into pressure sensitive adhesive microspheres prior to coating on a suitable wound dressing backing.*" (emphasis and words added). As for Counsel's argument that "*Delgado et al. teach away from immobilizing an antimicrobial agent into a pressure sensitive adhesive polymer*", even for the sake of argument that Counsel is correct. It clearly does not mean that, Delgado teaches away from incorporating an antimicrobial agent into a PSA, especially if a transfer agent is used. It should be noted that, the claims as presently recited do not preclude incorporating a transfer agent in combination with an antimicrobial agent into a PSA.

On page 13 last three lines to page 14 line 8, "*one of skill in the art of pressure sensitive adhesive would not be led to incorporate a quaternary ammonium-containing monomer of the type used to make a Perault hydrogel into a pressure sensitive adhesive polymer. This is particularly true ... because Delgado et al teach away from immobilizing an antimicrobial agent (e.g. a quaternary ammonium-containing monomer).*". Examiner strongly disagrees with Counsel's assertion. As noted above, it is well known in the art to incorporate antimicrobial agent into a PSA. Moreover, as correctly noted by Counsel, Delgado et al teaches incorporating a quaternary ammonium-containing monomer antimicrobial agent in combination with a transfer agent into a PSA. Note that, this monomer is similar to a polymerized quaternary ammonium-containing monomer taught by Perault. Moreover, Perault appears to envision adding a polymerized quaternary ammonium-containing monomer to an adhesive as evidence from the following

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passage: "[s]ince hydrogel is both inherently adhesive as well as antimicrobial, the use of more permanent adhesive may or may not be beneficial." (col. 4 lines 51-54).

On page 15 full paragraph 1, "... no reasonable expectation whatsoever that the disclosure of Perault combined with the disclosure of Delgado et al (with or without any alleged "admitted" prior art) would necessarily provide the embodiments of the present invention ... Again, this is particularly true because Delgado et al emphasize the need for a transfer agent to be used in combination with an antimicrobial agent to allow for migration of the antimicrobial agent within a pressure sensitive adhesive." Examiner strongly disagrees. It is suggested for Counsel to particularly point out which limitation(s) recited in the claims that are missing in the collectively teachings of the Admitted Prior Art, Delgado et al and Perault. Once again, even if Counsel is correct that, a transfer agent is required for an antimicrobial agent to be effective in a PSA, the claims as presently recited do not preclude using a transfer agent in a PSA composition. It is worth-noting that, the APA teaches incorporating a anti-microbial agent into a PSA without the use of a transfer agent (numbered paragraph 0003).

### **Conclusion**

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the



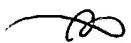
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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Chuan C. Yao whose telephone number is (571) 272-1224. The examiner can normally be reached on Monday-Friday with second Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sam Chuan C. Yao  
Primary Examiner  
Art Unit 1733

Scy  
10-08-04